Homework Week 08
Due Week 09

In lecture, a video-based tutorial on using Pro/E to import Lego-based parts was introduced. This tutorial detailed how to: physically connect Lego parts based on joint constraints; animate motions of parts; plot state data e.g. velocities and accelerations; and create animated videos.

1. Construct a Lego-based mechanism e.g. slider crank in Pro/E (25%)

2. Pick a major parameter to vary (say which hole on a beam that a pin is connected to).
   A. Vary this parameter, and generate output plots for at least 4 cases
   B. Overlay the plots in excel, and explain the effects of your variation. Often gains in one area (maybe a longer throw of an arm) can lead to higher accelerations (and forces).

3. Create a 10 to 20-second WMV video animation (75%)
   This video should show:
   A. A title slide with the name of your mechanism and your name
   B. Your original part in action
   C. A slide describing the changes you made (in 2A)
   D. Your modified part in action
   E. A slide(s) of your plots
   F. A slide with conclusions